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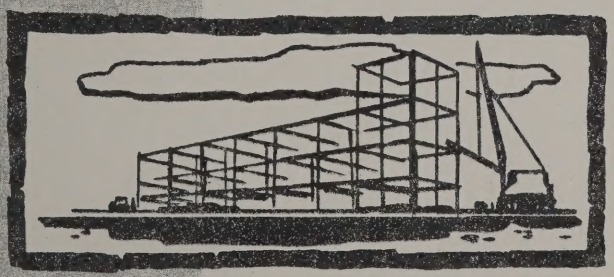

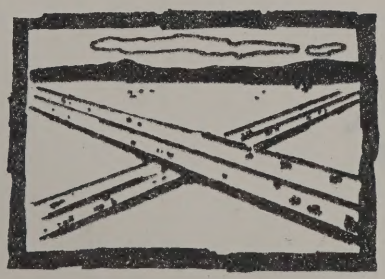

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TABLE OF CONTENTS

	Page Numbers
Introduction	1 - 5
Tables	6 - 19
FORTRAN Listing	20 - 21

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IN SOIL MECHANICS IT IS OFTEN NECESSARY TO ESTIMATE THE VERTICAL PRESSURE AT A POINT IN A FOUNDATION SOIL INDUCED BY A SUPERIMPOSED LOAD. CHARTS DEVELOPED FROM FORMULAS BASED ON ELASTIC THEORY ARE COMMONLY USED FOR THIS PURPOSE. USING THESE CHARTS, THE VERTICAL STRESS AT A POINT IN THE SOIL CAUSED BY A POINT LOAD OR A UNIFORMLY LOADED AREA ON THE SURFACE CAN BE READILY ESTIMATED. HOWEVER, NO SATISFACTORY CHARTS HAVE BEEN AVAILABLE WHEREBY THE VERTICAL PRESSURE INDUCED BY A TRAPEZOIDAL LOAD, SUCH AS A HIGHWAY EMBANKMENT OR AN EARTH DAM, COULD BE ESTIMATED WITH EASE.

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PROGRAM 5177

THE TABLES IN THIS BROCHURE GIVE INFLUENCE VALUES FOR VERTICAL PRESSURE UNDER A SYMMETRICAL EMBANKMENT OF INFINITE LENGTH. THEY WERE OBTAINED BY APPROXIMATING THE EMBANKMENT INTO TEN (10) HORIZONTAL LAYERS WITH VERTICAL SIDES AS SHOWN IN FIGURE 1. THE PRESSURE CAUSED BY EACH LAYER WAS DISTRIBUTED THROUGH ALL UNDERLYING EMBANKMENT LAYERS AS WELL AS THE FOUNDATION, USING NEWMARK'S EXPRESSION FOR VERTICAL STRESS BELOW THE CORNER OF A UNIFORMLY LOADED AREA.

$$\sigma_z = \frac{q}{4\pi}\left[\frac{2MN\sqrt{M^2+N^2+1}}{M^2+N^2+1+M^2N^2}\cdot\frac{M^2+N^2+2}{M^2+N^2+1}+\right.$$

$$\left.+\arcsin\frac{2MN\sqrt{M^2+N^2+1}}{M^2+N^2+1+M^2N^2}\right]$$

THIS EQUATION HAS BEEN DERIVED BY INTEGRATION FROM BOUSSINEG'S EQUATION FOR VERTICAL STRESS AT A POINT WITHIN A SEMI-INFINITE ELASTIC, ISOTROPIC, HOMOGENEOUS MASS DUE TO A POINT LOAD ACTING ON THE SURFACE OF THE MASS. FOR A DISCUSSION OF THE APPLICABILITY OF THE ELASTIC THEORY TO SOILS THE READER IS REFERRED TO FUNDAMENTALS OF SOILS MECHANICS, BY D. W. TAYLOR.

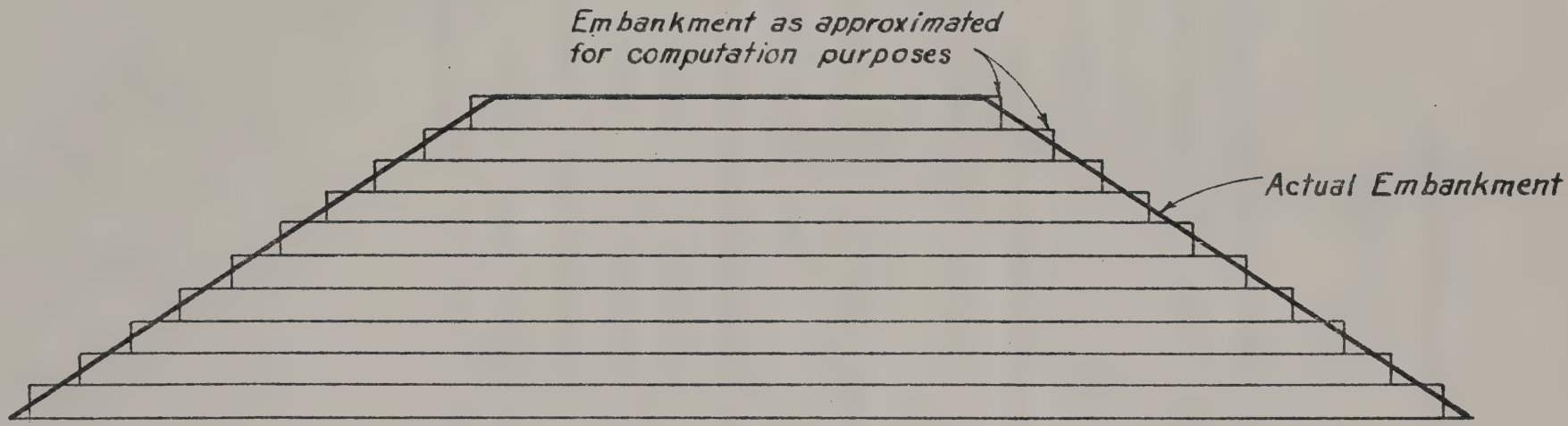
Embankment as approximated
for computation purposes
Actual Embankment

Figure 1

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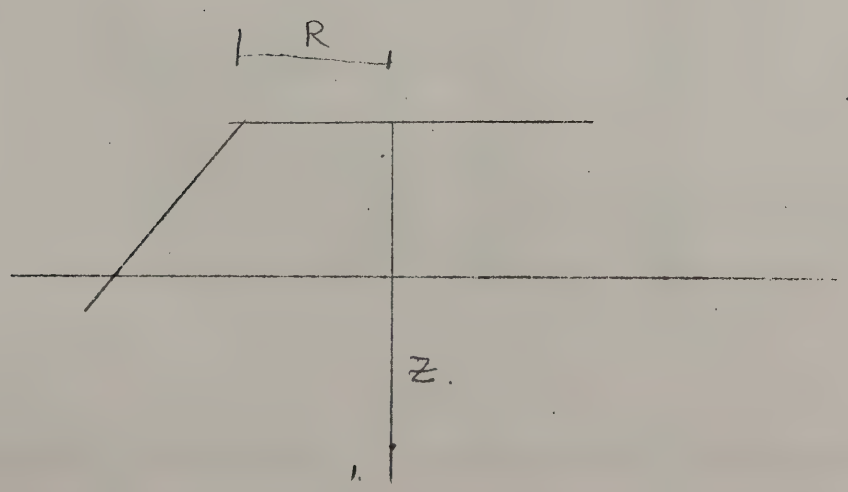
INFLUENCE VALUES FOR VERTICAL PRESSURE HAVE BEEN COMPUTED FOR EMBANKMENTS HAVING SIDE SLOPES (S) OF 1 VERTICAL TO 1.5, 2.0, 2.5, 3.0, 4.0, AND 8.0 HORIZONTAL AND RATIO H/R (SEE FIGURE 2) EQUAL TO 0.1, 0.25, 0.5, 1.0, 2.0, 3.0, AND 4.0.

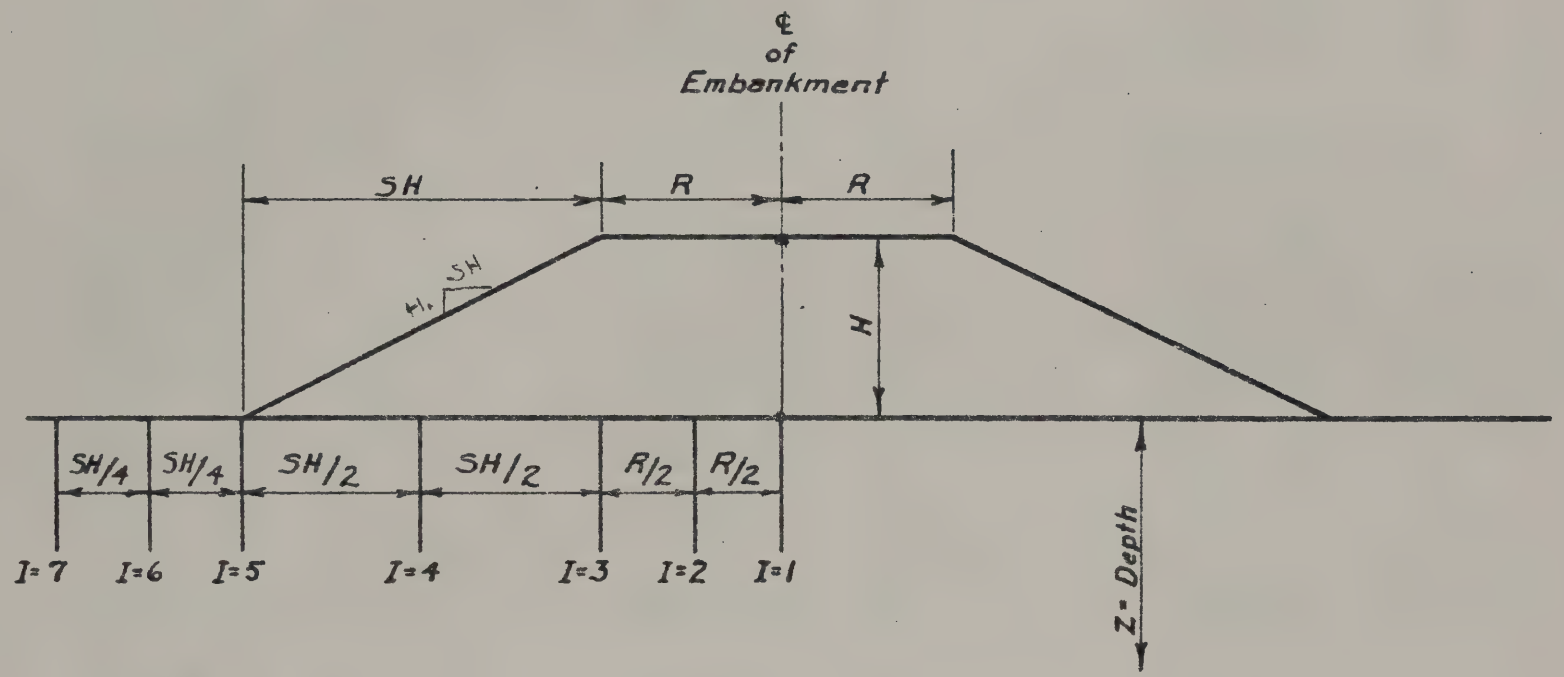
THE DEPTHS (Z) AT WHICH THE INFLUENCE VALUES HAVE BEEN DETERMINED ARE EXPRESSED AS FRACTIONS OF ONE-HALF ($\frac{1}{2}$) TO TOP WIDTH (R):

FOR DEPTH RATIO $\frac{Z}{R} = 0$, THE PRESSURE WAS ACTUALLY COMPUTED AT $\frac{Z}{R} = 0.001$

THE LATERAL POSITION OF EACH POINT, AT WHICH THE PRESSURE INFLUENCE VALUE HAS BEEN FOUND, IS REPRESENTED BY A NUMBER IN THE COLUMN UNDER THE LETTER I. THE POSITION OF EACH NUMBERED POINT RELATIVE TO THE EMBANKMENT IS SHOWN IN FIGURE 2.

THE INFLUENCE VALUES HAVE BEEN TABULATED TO FIVE DECIMAL PLACES. SUCH ACCURACY, OF COURSE, IS MEANINGLESS FOR PRACTICAL PURPOSES.





Vertical Pressure = ht. of embankment x unit wt. of embankment material x influence value

Figure 2

S = 1.5 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99991	.95712	.82631	.68499	.57009	.41587	.32340	.22180	.16815	.13524	.09067	.06815
2	.99969	.90806	.75407	.62937	.53284	.39926	.31512	.21900	.16691	.13459	.09047	.06807
3	.88098	.58441	.52535	.47975	.43483	.35422	.29196	.21091	.16327	.13266	.08988	.06781
4	.61058	.50679	.48574	.45543	.41906	.34709	.28850	.20999	.16306	.13269	.09004	.06798
5	.11084	.42965	.44646	.43114	.40318	.33982	.28495	.20906	.16287	.13275	.09023	.06816
6	.01104	.37253	.41617	.41159	.38955	.33232	.28027	.20666	.16133	.13163	.08956	.06768
7	.00575	.33342	.39475	.39790	.38030	.32772	.27777	.20574	.16090	.13140	.08949	.06765

S = 1.5 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99892	.95139	.83377	.70539	.59662	.44381	.34866	.24143	.18384	.14822	.09967	.07502
2	.99654	.90978	.77539	.65754	.56272	.42759	.34027	.23850	.18252	.14752	.09945	.07492
3	.88166	.67846	.58527	.52365	.47097	.38306	.31665	.22998	.17863	.14544	.09881	.07465
4	.61078	.52362	.49514	.46563	.43206	.36449	.30723	.22725	.17787	.14539	.09917	.07503
5	.10837	.35997	.40413	.40664	.39183	.34460	.29686	.22413	.17696	.14528	.09956	.07545
6	.01068	.25115	.33695	.36044	.35823	.32507	.28434	.21768	.17287	.14233	.09784	.07423
7	.00555	.18874	.29235	.32888	.33541	.31257	.27710	.21480	.17149	.14158	.09760	.07413

S = 1.5 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99348	.93912	.83882	.72955	.63190	.48488	.38747	.27276	.20926	.16941	.11449	.08637
2	.98437	.90510	.79649	.69257	.60358	.46972	.37910	.26964	.20781	.16863	.11425	.08626
3	.88145	.75703	.65880	.58477	.52400	.42729	.35534	.26058	.20357	.16634	.11352	.08595
4	.61059	.54765	.51059	.48068	.45009	.38881	.33444	.25374	.20125	.16574	.11407	.08664
5	.10738	.29218	.35104	.37042	.37062	.34535	.30970	.24498	.19800	.16467	.11455	.08734
6	.01044	.14741	.24367	.28938	.30790	.30563	.28296	.23074	.18901	.15829	.11093	.08482
7	.00539	.08794	.18243	.23846	.26708	.27983	.26644	.22334	.18524	.15616	.11023	.08451

S = 1.5 H/R = 1.0

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.97115	.91368	.83715	.75569	.67830	.54889	.45315	.32992	.25715	.21001	.14343	.10871
2	.95437	.88970	.81202	.73279	.65898	.53649	.44542	.32664	.25553	.20912	.14314	.10858
3	.87886	.80739	.73351	.66430	.60251	.50076	.42306	.31703	.25076	.20645	.14227	.10820
4	.60951	.57314	.53589	.50536	.47762	.42508	.37689	.29882	.24317	.20337	.14264	.10923
5	.10643	.22804	.28577	.31638	.33101	.33328	.31780	.27290	.23113	.19766	.14221	.10999
6	.00999	.06935	.14255	.19439	.22783	.25886	.26299	.24084	.21036	.18298	.13421	.10459
7	.00506	.03327	.08419	.13255	.16978	.21324	.22884	.22197	.19950	.17635	.13181	.10348

S = 1.5 H/R = 2.0

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.92152	.87526	.82486	.77295	.72163	.62626	.54476	.42261	.34056	.28354	.19823	.15179
2	.90861	.86261	.81297	.76204	.71179	.61862	.53906	.41953	.33883	.28250	.19786	.15162
3	.86777	.82397	.77719	.72943	.68253	.59603	.52225	.41043	.33369	.27941	.19675	.15112
4	.60653	.58729	.56250	.53742	.51383	.47085	.43184	.36393	.30935	.26644	.19445	.15164
5	.10513	.17865	.22363	.25432	.27543	.29836	.30480	.29284	.26830	.24211	.18753	.15007
6	.00925	.03032	.06635	.10337	.13522	.18111	.20780	.22600	.22087	.20715	.16838	.13757
7	.00457	.01370	.03117	.05430	.07888	.12262	.15434	.18652	.19387	.18761	.15968	.13317

S = 1.5 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.88683	.85122	.81430	.77681	.73941	.66709	.60067	.49037	.40789	.34644	.24852	.19251
2	.87881	.84377	.80742	.77047	.73357	.66221	.59667	.48779	.40625	.34538	.24810	.19231
3	.85465	.82146	.78685	.75153	.71616	.64766	.58477	.48014	.40139	.34221	.24684	.19171
4	.60382	.59039	.57320	.55434	.53533	.49916	.46598	.40713	.35712	.31523	.23901	.19007
5	.10426	.15742	.19362	.22064	.24130	.26901	.28397	.29078	.28123	.26492	.21995	.18265
6	.00875	.02019	.04011	.06443	.08882	.13084	.16186	.19721	.20941	.20903	.18746	.16136
7	.00425	.00921	.01778	.02989	.04444	.07581	.10466	.14629	.16822	.17677	.17022	.15170

S = 1.5 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.86379	.83542	.80650	.77733	.74816	.69081	.63621	.53953	.46124	.39925	.29408	.23069
2	.85858	.83060	.80204	.77319	.74430	.68747	.63334	.53747	.45979	.39824	.29363	.23047
3	.84299	.81620	.78870	.76080	.73278	.67749	.62476	.53131	.45548	.39522	.29231	.22980
4	.60166	.59120	.57824	.56371	.54848	.51814	.48941	.43756	.39229	.35294	.27677	.22441
5	.10365	.14541	.17575	.19950	.21861	.24668	.26483	.28156	.28232	.27453	.24168	.20801
6	.00841	.01599	.02854	.04501	.06316	.09834	.12803	.16903	.19084	.20001	.19523	.17680
7	.00404	.00734	.01256	.01988	.02905	.05088	.07387	.11382	.14147	.15807	.16923	.16077

S = 2.0 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99992	.95918	.83285	.69385	.57933	.42401	.33021	.22673	.17197	.13833	.09276	.06973
2	.99970	.91383	.76372	.63938	.54235	.40729	.32182	.22388	.17070	.13767	.09256	.06964
3	.90202	.61150	.54095	.49125	.44442	.36183	.29833	.21564	.16698	.13570	.09196	.06939
4	.60147	.51021	.48833	.45871	.42318	.35212	.29357	.21435	.16668	.13573	.09217	.06960
5	.08429	.40861	.43599	.42607	.40164	.34209	.28860	.21300	.16636	.13577	.09241	.06984
6	.00511	.33545	.39601	.39996	.38330	.33189	.28221	.20974	.16428	.13426	.09151	.06919
7	.00258	.28732	.36806	.38174	.37080	.32555	.27873	.20843	.16367	.13393	.09141	.06915

S = 2.0 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99898	.95557	.84641	.72350	.61651	.46248	.36477	.25342	.19321	.15586	.10487	.07895
2	.99683	.91939	.79362	.67839	.58358	.44616	.35618	.25037	.19183	.15513	.10464	.07885
3	.90257	.72053	.61800	.54970	.49324	.40111	.33195	.24152	.18777	.15296	.10397	.07856
4	.60151	.53139	.50120	.47267	.44071	.37536	.31860	.23749	.18655	.15277	.10441	.07906
5	.08250	.32324	.38138	.39347	.38567	.34719	.30347	.23266	.18499	.15243	.10486	.07959
6	.00492	.19648	.29645	.33308	.34084	.32040	.28607	.22365	.17931	.14837	.10252	.07794
7	.00248	.13298	.24308	.29292	.31069	.30303	.27566	.21936	.17722	.14722	.10215	.07778

S = 2.0 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99404	.94604	.85672	.75618	.66303	.51691	.41658	.29548	.22738	.18435	.12477	.09417
2	.98619	.91764	.82071	.72335	.63678	.50197	.40803	.29219	.22583	.18351	.12451	.09406
3	.90235	.79675	.70269	.62593	.56181	.45976	.38365	.28261	.22128	.18104	.12372	.09372
4	.60131	.55715	.52090	.49214	.46362	.40610	.35341	.27208	.21741	.17978	.12430	.09456
5	.08179	.24856	.31672	.34640	.35569	.34401	.31643	.25790	.21163	.17748	.12462	.09536
6	.00477	.09763	.19124	.24603	.27502	.29032	.27919	.23758	.19879	.16844	.11960	.09191
7	.00238	.05036	.12872	.18785	.22510	.25588	.25579	.22631	.19283	.16500	.11843	.09139

S = 2.0 H/R = 1.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.97463	.92533	.85968	.78834	.71840	.59560	.49966	.37000	.29061	.23828	.16341	.12404
2	.96077	.90589	.83934	.76944	.70192	.58420	.49210	.36656	.28886	.23729	.16308	.12389
3	.89999	.84016	.77612	.71269	.65327	.55100	.47012	.35647	.28368	.23434	.16210	.12346
4	.60052	.57863	.54863	.52127	.49613	.44853	.40387	.32786	.27070	.22839	.16190	.12450
5	.08116	.18536	.24452	.28130	.30347	.32046	.31679	.28582	.24939	.21724	.15990	.12484
6	.00451	.03809	.09472	.14409	.18130	.22576	.24349	.24031	.21916	.19575	.14836	.11720
7	.00220	.01626	.04821	.08624	.12115	.17187	.19944	.21291	.20218	.18488	.14416	.11522

S = 2.0 H/R = 2.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.93302	.89414	.85184	.80801	.76404	.67965	.60385	.48252	.39556	.33267	.23536	.18106
2	.92269	.88411	.84248	.79941	.75622	.67334	.59888	.47954	.39377	.33155	.23494	.18087
3	.89035	.85370	.81442	.77377	.73294	.65457	.58411	.47072	.38844	.32820	.23368	.18028
4	.59865	.58822	.57176	.55295	.53385	.49722	.46298	.40107	.34842	.30491	.22769	.17948
5	.08044	.14104	.18297	.21454	.23867	.27063	.28719	.29300	.28054	.26145	.21248	.17411
6	.00415	.01475	.03656	.06375	.09083	.13671	.16964	.20478	.21431	.21088	.18391	.15557
7	.00197	.00623	.01524	.02888	.04554	.08102	.11265	.15573	.17593	.18170	.16921	.14763

S = 2.0 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.90452	.87480	.84403	.81272	.78128	.71936	.66055	.55710	.47411	.40892	.29937	.23397
2	.89820	.86897	.83866	.80778	.77673	.71550	.65729	.55481	.47254	.40783	.29890	.23373
3	.87926	.85156	.82268	.79308	.76318	.70398	.64755	.54800	.46785	.40460	.29750	.23304
4	.59710	.59009	.57955	.56680	.55291	.52437	.49663	.44525	.39946	.35925	.28107	.22736
5	.08001	.12300	.15545	.18148	.20289	.23525	.25698	.27870	.28226	.27591	.24400	.21009
6	.00393	.00952	.02035	.03566	.05324	.08866	.11956	.16368	.18807	.19900	.19615	.17809
7	.00183	.00411	.00828	.01467	.02309	.04410	.06709	.10839	.13785	.15599	.16934	.16157

S = 2.0 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.88577	.86216	.83814	.81388	.78955	.74121	.69417	.60712	.53201	.46913	.35520	.28236
2	.88170	.85842	.83468	.81068	.78657	.73861	.69190	.60539	.53072	.46816	.35472	.28211
3	.86957	.84725	.82437	.80112	.77768	.73087	.68512	.60023	.52684	.46527	.35330	.28135
4	.59592	.59056	.58296	.57370	.56332	.54094	.51815	.47454	.43461	.39843	.32370	.26829
5	.07973	.11305	.13966	.16171	.18050	.21065	.23309	.26114	.27362	.27616	.26057	.23453
6	.00378	.00745	.01395	.02341	.03509	.06137	.08730	.13038	.16013	.17879	.19439	.18813
7	.00175	.00326	.00574	.00941	.01431	.02735	.04322	.07669	.10588	.12820	.15733	.16259

S = 2.5 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99992	.96107	.83901	.70235	.58832	.43203	.33697	.23165	.17577	.14142	.09486	.07131
2	.99971	.91900	.77285	.64907	.55164	.41521	.32847	.22875	.17448	.14075	.09465	.07122
3	.91662	.63686	.55624	.50262	.45391	.36938	.30466	.22035	.17069	.13874	.09403	.07096
4	.59328	.51351	.49084	.46184	.42713	.35700	.29854	.21866	.17027	.13875	.09429	.07122
5	.07081	.38845	.42553	.42077	.39979	.34406	.29204	.21684	.16981	.13877	.09458	.07152
6	.00273	.30134	.37625	.38819	.37670	.33108	.28387	.21267	.16715	.13685	.09345	.07071
7	.00136	.24663	.34228	.36555	.36095	.32292	.27932	.21094	.16634	.13641	.09331	.07065

S = 2.5 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99903	.95910	.85745	.73989	.63504	.48042	.38049	.26527	.20252	.16347	.11006	.08288
2	.99707	.92721	.80952	.69746	.60317	.46408	.37173	.26211	.20108	.16271	.10983	.08277
3	.91708	.75414	.64776	.57441	.51471	.41872	.34697	.25295	.19685	.16044	.10912	.08247
4	.59324	.53793	.50677	.47907	.44856	.38544	.32937	.24743	.19508	.16006	.10963	.08307
5	.06953	.29153	.35963	.37993	.37850	.34842	.30892	.24055	.19267	.15937	.11010	.08369
6	.00262	.15439	.26007	.30660	.32287	.31426	.28641	.22881	.18529	.15413	.10712	.08160
7	.00130	.09473	.20133	.25945	.28611	.29201	.27263	.22291	.18237	.15251	.10659	.08137

S = 2.5 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99451	.95153	.87120	.77853	.69011	.54628	.44408	.31756	.24520	.19912	.13500	.10195
2	.98763	.92720	.84005	.74929	.66593	.53173	.43546	.31413	.24356	.19823	.13472	.10183
3	.91685	.82529	.73784	.66155	.59598	.49028	.41076	.30411	.23873	.19558	.13387	.10146
4	.59306	.56302	.52937	.50186	.47515	.42116	.37043	.28925	.23291	.19342	.13438	.10242
5	.06902	.21515	.28664	.32327	.33964	.33974	.32001	.26858	.22387	.18943	.13437	.10324
6	.00252	.06639	.15060	.20843	.24397	.27295	.27224	.24174	.20681	.17746	.12784	.09880
7	.00123	.03053	.09175	.14757	.18824	.23116	.24223	.22623	.19828	.17241	.12608	.09801

S = 2.5 H/R = 1.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.97736	.93416	.87670	.81348	.75018	.63489	.54063	.40732	.32263	.26572	.18312	.13924
2	.96557	.91782	.85966	.79751	.73598	.62454	.53342	.40381	.32077	.26464	.18275	.13908
3	.91469	.86309	.80694	.74953	.69388	.59418	.51231	.39347	.31528	.26146	.18167	.13859
4	.59246	.57987	.55668	.53294	.51036	.46721	.42604	.35318	.29571	.25175	.18050	.13947
5	.06860	.15619	.21247	.25125	.27756	.30471	.31061	.29298	.26308	.23349	.17610	.13895
6	.00236	.02248	.06454	.10765	.14409	.19457	.22142	.23424	.22285	.20452	.16059	.12883
7	.00113	.00891	.02922	.05745	.08697	.13706	.17059	.19909	.19948	.18883	.15411	.12568

S = 2.5 H/R = 2.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.94157	.90797	.87147	.83355	.79520	.72020	.65056	.53342	.44466	.37796	.27099	.20963
2	.93297	.89966	.86375	.82646	.78874	.71488	.64624	.53064	.44287	.37679	.27052	.20941
3	.90617	.87457	.84067	.80537	.76953	.69906	.63338	.52236	.43757	.37332	.26914	.20874
4	.59122	.58598	.57524	.56146	.54640	.51569	.48582	.43002	.38047	.33780	.25805	.20577
5	.06817	.11747	.15479	.18464	.20894	.24459	.26704	.28569	.28391	.27233	.23187	.19481
6	.00216	.00807	.02162	.04089	.06231	.10328	.13694	.18078	.20099	.20666	.19305	.16941
7	.00100	.00328	.00836	.01667	.02774	.05448	.08198	.12694	.15487	.16911	.17182	.15716

S = 2.5 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.91740	.89182	.86538	.83846	.81134	.75743	.70523	.60993	.52942	.46332	.34646	.27350
2	.91218	.88703	.86098	.83442	.80762	.75426	.70251	.60793	.52797	.46226	.34596	.27324
3	.89658	.87274	.84789	.82240	.79654	.74479	.69438	.60196	.52362	.45911	.34448	.27247
4	.59028	.58693	.58059	.57206	.56210	.54003	.51720	.47284	.43167	.39419	.31725	.26107
5	.06793	.10224	.13040	.15397	.17423	.20698	.23141	.26169	.27467	.27672	.25871	.23074
6	.00205	.00512	.01142	.02115	.03340	.06112	.08843	.13340	.16385	.18231	.19572	.18718
7	.00093	.00214	.00443	.00807	.01314	.02699	.04400	.07958	.10999	.13264	.16035	.16340

S = 2.5 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.90158	.88132	.86070	.83990	.81899	.77727	.73620	.65823	.58812	.52694	.40966	.33033
2	.89824	.87825	.85788	.83728	.81657	.77515	.73434	.65677	.58698	.52604	.40918	.33006
3	.88829	.86911	.84946	.82949	.80933	.76884	.72878	.65242	.58357	.52338	.40775	.32925
4	.58959	.58709	.58275	.57690	.56989	.55364	.53590	.49978	.46507	.43254	.36193	.30618
5	.06778	.09397	.11674	.13626	.15345	.18249	.20577	.23892	.25853	.26848	.26818	.25130
6	.00198	.00399	.00767	.01334	.02086	.03964	.06041	.09971	.13132	.15461	.18450	.18975
7	.00089	.00169	.00304	.00508	.00790	.01589	.02655	.05214	.07818	.10109	.13946	.15557

S = 3.0 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99992	.96280	.84480	.71051	.59705	.43994	.34366	.23654	.17957	.14451	.09695	.07289
2	.99972	.92364	.78146	.65842	.56071	.42304	.33507	.23359	.17825	.14382	.09674	.07280
3	.92741	.66035	.57117	.51383	.46330	.37687	.31095	.22505	.17439	.14177	.09611	.07253
4	.58655	.51668	.49326	.46484	.43092	.36174	.30341	.22293	.17383	.14176	.09641	.07284
5	.06342	.36929	.41514	.41530	.39765	.34574	.29526	.22058	.17319	.14173	.09674	.07319
6	.00162	.27036	.35700	.37634	.36982	.32992	.28526	.21547	.16996	.13940	.09537	.07221
7	.00080	.21133	.31763	.34946	.35082	.31987	.27957	.21328	.16893	.13884	.09520	.07214

S = 3.0 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99908	.96213	.86715	.75477	.65227	.49763	.39581	.27697	.21176	.17105	.11524	.08680
2	.99728	.93367	.82344	.71489	.62154	.48134	.38692	.27371	.21026	.17025	.11500	.08669
3	.92781	.78114	.67451	.59769	.53531	.43587	.36172	.26425	.20587	.16789	.11426	.08638
4	.58647	.54328	.51186	.48490	.45573	.39481	.33958	.25707	.20344	.16726	.11481	.08707
5	.06249	.26451	.33915	.36631	.37058	.34848	.31332	.24782	.20000	.16611	.11527	.08777
6	.00155	.12230	.22797	.28148	.30481	.30697	.28553	.23318	.19082	.15962	.11161	.08523
7	.00076	.06861	.16667	.22900	.26231	.27996	.26826	.22549	.18694	.15744	.11090	.08491

S = 3.0 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99492	.95600	.88310	.79745	.71375	.57315	.46998	.33898	.26269	.21372	.14517	.10971
2	.98880	.93474	.85576	.77125	.69151	.55910	.46138	.33542	.26097	.21277	.14487	.10958
3	.92758	.84675	.76614	.69216	.62658	.51879	.43661	.32504	.25589	.20997	.14396	.10918
4	.58630	.56637	.53621	.51014	.48505	.43434	.38571	.30531	.24774	.20666	.14432	.11022
5	.06213	.18954	.26077	.30169	.32339	.33343	.32104	.27720	.23475	.20050	.14379	.11095
6	.00148	.04645	.11949	.17661	.21566	.25474	.26306	.24356	.21316	.18535	.13563	.10548
7	.00071	.01954	.06647	.11626	.15694	.20712	.22704	.22363	.20174	.17843	.13314	.10434

S = 3.0 H/R = 1.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.97957	.94111	.89002	.83338	.77582	.66807	.57665	.44189	.35311	.29225	.20251	.15430
2	.96933	.92702	.87538	.81959	.76343	.65870	.56985	.43837	.35118	.29111	.20211	.15413
3	.92558	.88013	.83023	.77823	.72663	.63110	.54988	.42798	.34547	.28774	.20093	.15360
4	.58585	.57909	.56154	.54143	.52136	.48227	.44438	.37521	.31835	.27345	.19840	.15409
5	.06183	.13574	.18770	.22616	.25435	.28812	.30142	.29573	.27281	.24663	.19078	.15227
6	.00137	.01414	.04522	.08149	.11506	.16686	.19924	.22462	.22249	.20976	.17088	.13941
7	.00064	.00533	.01870	.03939	.06332	.10911	.14451	.18298	.19296	.18901	.16171	.13482

S = 3.0 H/R = 2.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.94822	.91859	.88646	.85302	.81907	.75184	.68803	.57661	.48820	.41938	.30497	.23740
2	.94085	.91150	.87989	.84700	.81357	.74727	.68425	.57405	.48647	.41821	.30448	.23715
3	.91795	.89013	.86027	.82909	.79724	.73370	.67299	.56641	.48133	.41471	.30300	.23643
4	.58500	.58274	.57585	.56588	.55418	.52873	.50284	.45282	.40680	.36581	.28556	.23044
5	.06156	.10194	.13486	.16223	.18545	.22182	.24731	.27467	.28155	.27697	.24630	.21221
6	.00125	.00483	.01362	.02731	.04386	.07875	.11047	.15754	.18470	.19760	.19697	.17936
7	.00057	.00191	.00501	.01033	.01782	.03759	.06023	.10253	.13376	.15355	.16931	.16233

S = 3.0 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.92725	.90477	.88154	.85790	.83404	.78637	.73967	.65228	.57563	.51040	.38969	.31095
2	.92280	.90069	.87781	.85448	.83090	.78368	.73735	.65053	.57431	.50940	.38919	.31067
3	.90953	.88856	.86672	.84431	.82153	.77566	.73042	.64529	.57034	.50641	.38767	.30985
4	.58439	.58308	.57938	.57373	.56664	.54976	.53117	.49316	.45646	.42205	.34817	.29125
5	.06142	.08893	.11338	.13438	.15293	.18426	.20919	.24382	.26307	.27158	.26636	.24547
6	.00119	.00303	.00696	.01335	.02194	.04316	.06614	.10827	.14076	.16357	.18946	.19025
7	.00053	.00125	.00261	.00485	.00807	.01739	.02979	.05878	.08703	.11078	.14731	.15959

S = 3.0 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.91358	.89579	.87770	.85945	.84111	.80440	.76804	.69790	.63310	.57481	.45779	.37447
2	.91074	.89318	.87531	.85724	.83906	.80261	.76646	.69666	.63210	.57400	.45732	.37419
3	.90230	.88545	.86819	.85066	.83295	.79729	.76176	.69293	.62910	.57159	.45592	.37335
4	.58396	.58302	.58065	.57701	.57232	.56060	.54693	.51730	.48738	.45846	.39303	.33862
5	.06133	.08198	.10152	.11868	.13408	.16095	.18354	.21827	.24178	.25662	.26847	.26058
6	.00115	.00235	.00461	.00821	.01319	.02659	.04275	.07661	.10699	.13177	.17037	.18502
7	.00051	.00098	.00178	.00301	.00476	.00989	.01714	.03624	.05796	.07908	.12052	.14390

S = 4.0 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99992	.96588	.85539	.72585	.61379	.45540	.35686	.24627	.18714	.15067	.10113	.07604
2	.99974	.93160	.79728	.67618	.57822	.43837	.34809	.24322	.18577	.14995	.10091	.07595
3	.94240	.70167	.59978	.53574	.48176	.39165	.32342	.23439	.18176	.14782	.10025	.07567
4	.57695	.52256	.49785	.47047	.43803	.37078	.31283	.23131	.18089	.14773	.10063	.07607
5	.05641	.33429	.39472	.40395	.39266	.34829	.30107	.22774	.17981	.14757	.10103	.07652
6	.00070	.21767	.32045	.35272	.35539	.32664	.28724	.22067	.17536	.14437	.09918	.07520
7	.00034	.15538	.27225	.31801	.33009	.31268	.27912	.21744	.17382	.14354	.09891	.07509

S = 4.0 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99916	.96703	.88334	.78059	.68321	.52993	.42522	.29991	.23002	.18609	.12557	.09463
2	.99762	.94371	.84648	.74535	.65483	.51390	.41615	.29647	.22842	.18523	.12530	.09451
3	.94272	.82124	.71969	.63976	.57375	.46874	.39034	.28648	.22372	.18268	.12450	.09417
4	.57687	.55090	.52072	.49514	.46830	.41161	.35836	.27544	.21967	.18137	.12507	.09502
5	.05590	.22226	.30249	.33973	.35344	.34578	.31931	.26056	.21361	.17894	.12537	.09581
6	.00066	.07901	.17572	.23627	.26973	.28999	.28072	.23967	.20050	.16975	.12030	.09233
7	.00032	.03807	.11507	.17761	.21856	.25427	.25641	.22801	.19436	.16622	.11911	.09181

S = 4.0 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99557	.96284	.90147	.82753	.75266	.62013	.51717	.37971	.29663	.24233	.16533	.12514
2	.99059	.94592	.87964	.80609	.73379	.60726	.50879	.37599	.29476	.24129	.16498	.12499
3	.94249	.87688	.80833	.74101	.67810	.56990	.48449	.36510	.28926	.23820	.16397	.12454
4	.57675	.56866	.54592	.52320	.50104	.45615	.41180	.33425	.27540	.23187	.16372	.12559
5	.05569	.15413	.21996	.26410	.29233	.31724	.31755	.28907	.25264	.21998	.16154	.12587
6	.00062	.02462	.07737	.12793	.16819	.21891	.24094	.24156	.22128	.19782	.14977	.11813
7	.00029	.00915	.03688	.07363	.10939	.16405	.19533	.21293	.20355	.18652	.14544	.11610

S = 4.0 H/R = 1.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.98294	.95137	.90956	.86279	.81440	.72041	.63618	.50313	.40937	.34243	.24024	.18396
2	.97489	.94035	.89815	.85202	.80462	.71268	.63026	.49973	.40738	.34120	.23979	.18375
3	.94076	.90389	.86312	.81977	.77555	.68985	.61276	.48968	.40147	.33756	.23845	.18313
4	.57647	.57539	.56570	.55184	.53647	.50458	.47255	.41116	.35716	.31208	.23199	.18223
5	.05554	.10985	.15317	.18822	.21651	.25643	.27923	.29237	.28292	.26480	.21558	.17640
6	.00057	.00649	.02402	.04876	.07512	.12274	.15901	.20025	.21345	.21183	.18593	.15733
7	.00026	.00231	.00876	.02019	.03535	.07003	.10282	.14993	.17346	.18127	.17055	.14907

S = 4.0 H/R = 2.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.95795	.93393	.90794	.88086	.85325	.79784	.74387	.64483	.56070	.49126	.36775	.29026
2	.95223	.92844	.90287	.87623	.84902	.79431	.74089	.64269	.55915	.49013	.36722	.28998
3	.93449	.91193	.88776	.86247	.83647	.78380	.73201	.63629	.55452	.48678	.36564	.28916
4	.57602	.57628	.57367	.56857	.56165	.54456	.52538	.48555	.44658	.41001	.33266	.27485
5	.05541	.08337	.10946	.13205	.15214	.18616	.21305	.24929	.26784	.27439	.26320	.23798
6	.00052	.00210	.00627	.01355	.02343	.04754	.07301	.11814	.15127	.17311	.19373	.18940
7	.00023	.00080	.00218	.00466	.00839	.01943	.03400	.06696	.09745	.12170	.15510	.16263

S = 4.0 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.94144	.92326	.90452	.88545	.86619	.82750	.78913	.71525	.64725	.58638	.46502	.37927
2	.93800	.92011	.90165	.88283	.86378	.82544	.78734	.71386	.64616	.58551	.46453	.37898
3	.92773	.91077	.89313	.87503	.85662	.81931	.78202	.70973	.64290	.58292	.46305	.37811
4	.57574	.57602	.57501	.57264	.56910	.55935	.54725	.51974	.49096	.46254	.39703	.34195
5	.05535	.07352	.09244	.10926	.12454	.15164	.17486	.21142	.23684	.25333	.26789	.26120
6	.00050	.00130	.00308	.00617	.01065	.02315	.03868	.07205	.10270	.12811	.16851	.18442
7	.00022	.00052	.00112	.00212	.00361	.00823	.01500	.03340	.05485	.07606	.11842	.14280

S = 4.0 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.93072	.91635	.90176	.88706	.87228	.84264	.81310	.75517	.69990	.64824	.53737	.45154
2	.92852	.91434	.89993	.88537	.87072	.84128	.81190	.75421	.69911	.64758	.53695	.45126
3	.92201	.90839	.89447	.88033	.86605	.83722	.80832	.75133	.69674	.64561	.53568	.45044
4	.57556	.57578	.57530	.57402	.57197	.56593	.55792	.53828	.51640	.49390	.43926	.38997
5	.05532	.06847	.08320	.09674	.10915	.13152	.15134	.18460	.21048	.23004	.25751	.26435
6	.00048	.00101	.00201	.00368	.00611	.01327	.02299	.04666	.07151	.09467	.13950	.16601
7	.00021	.00041	.00076	.00130	.00208	.00449	.00813	.01889	.03307	.04890	.08722	.11653

S = 8.0 H/R = .10

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99993	.97455	.88758	.77616	.67180	.51246	.40712	.28426	.21699	.17509	.11778	.08863
2	.99980	.95228	.84532	.73557	.63999	.49545	.39784	.28087	.21544	.17427	.11752	.08852
3	.96965	.80761	.69460	.61469	.55036	.44798	.37155	.27103	.21089	.17183	.11677	.08820
4	.56195	.53937	.51333	.48901	.46148	.40192	.34663	.26289	.20810	.17105	.11733	.08892
5	.05092	.23597	.32212	.35714	.36643	.34980	.31688	.25228	.20406	.16963	.11775	.08965
6	.00008	.09767	.20562	.26591	.29489	.30417	.28623	.23615	.19400	.16255	.11380	.08691
7	.00004	.05097	.14469	.21109	.24939	.27455	.26705	.22751	.18962	.16008	.11300	.08656

S = 8.0 H/R = .25

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99938	.97838	.92261	.84857	.77137	.63353	.52664	.38486	.29978	.24444	.16631	.12570
2	.99843	.96509	.90084	.82589	.75114	.61978	.51778	.38098	.29785	.24337	.16596	.12555
3	.96982	.89783	.82579	.75611	.69131	.57997	.49213	.36965	.29218	.24019	.16493	.12510
4	.56190	.55936	.54197	.52263	.50259	.45970	.41576	.33755	.27784	.23367	.16465	.12615
5	.05083	.13941	.20662	.25408	.28551	.31491	.31758	.29064	.25428	.22139	.16238	.12640
6	.00008	.01951	.06920	.11955	.16102	.21487	.23927	.24208	.22232	.19887	.15049	.11860
7	.00003	.00667	.03189	.06748	.10329	.15971	.19292	.21280	.20419	.18733	.14609	.11654

S = 8.0 H/R = .50

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99710	.97720	.93996	.89331	.84305	.74367	.65446	.51452	.41688	.34767	.24281	.18546
2	.99441	.96803	.92809	.88137	.83201	.73503	.64793	.51087	.41477	.34638	.24235	.18525
3	.96965	.93118	.88962	.84507	.79916	.70950	.62867	.50006	.40851	.34256	.24096	.18461
4	.56185	.56336	.55776	.54747	.53495	.50685	.47673	.41623	.36169	.31583	.23424	.18365
5	.05079	.09708	.13890	.17440	.20412	.24780	.27400	.29146	.28388	.26642	.21716	.17758
6	.00007	.00406	.01919	.04214	.06759	.11535	.15303	.19745	.21272	.21216	.18693	.15822
7	.00003	.00125	.00646	.01664	.03080	.06457	.09762	.14662	.17193	.18089	.17120	.14980

S = 8.0 H/R = 1.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.99005	.97176	.94751	.92008	.89107	.83166	.77335	.66676	.57706	.50368	.37459	.29449
2	.98603	.96598	.94148	.91439	.88586	.82738	.76983	.66432	.57534	.50245	.37403	.29420
3	.96855	.94677	.92302	.89737	.87041	.81471	.75937	.65705	.57021	.49880	.37235	.29334
4	.56178	.56315	.56270	.56003	.55547	.54244	.52632	.49001	.45231	.41587	.33738	.27830
5	.05077	.07252	.09694	.11856	.13834	.17306	.20159	.24183	.26379	.27274	.26432	.23969
6	.00006	.00087	.00398	.01009	.01887	.04135	.06607	.11156	.14621	.16968	.19312	.18994
7	.00003	.00028	.00120	.00313	.00626	.01615	.02983	.06207	.09294	.11808	.15372	.16252

S = 8.0 H/R = 2.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.97713	.96335	.94842	.93286	.91695	.88463	.85222	.78864	.72830	.67229	.55345	.46269
2	.97424	.96048	.94574	.93042	.91473	.88279	.85065	.78745	.72735	.67152	.55298	.46239
3	.96505	.95177	.93778	.92320	.90817	.87730	.84597	.78389	.72453	.66923	.55157	.46149
4	.56172	.56253	.56288	.56276	.56203	.55871	.55326	.53791	.51904	.49846	.44561	.39612
5	.05075	.05928	.07247	.08511	.09682	.11832	.13791	.17203	.19969	.22132	.25341	.26324
6	.00006	.00026	.00085	.00202	.00392	.00996	.01864	.04078	.06497	.08815	.13457	.16307
7	.00002	.00009	.00027	.00061	.00116	.00305	.00613	.01581	.02916	.04452	.08296	.11343

S = 8.0 H/R = 3.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.96873	.95822	.94740	.93642	.92536	.90310	.88081	.83657	.79332	.75155	.65567	.57365
2	.96694	.95655	.94587	.93504	.92409	.90202	.87988	.83584	.79272	.75105	.65533	.57341
3	.96152	.95156	.94134	.93091	.92032	.89883	.87711	.83367	.79095	.74956	.65430	.57267
4	.56168	.56229	.56260	.56275	.56268	.56170	.55956	.55224	.54188	.52952	.49428	.45741
5	.05075	.05541	.06358	.07246	.08099	.09677	.11130	.13773	.16105	.18142	.22011	.24372
6	.00006	.00016	.00040	.00084	.00154	.00389	.00758	.01854	.03277	.04852	.08745	.11991
7	.00002	.00006	.00013	.00027	.00047	.00115	.00227	.00607	.01199	.01976	.04408	.06990

S = 8.0 H/R = 4.00

INFLUENCE VALUES

I	Z/R .0	Z/R .5	Z/R 1.0	Z/R 1.5	Z/R 2.0	Z/R 3.0	Z/R 4.0	Z/R 6.0	Z/R 8.0	Z/R 10.0	Z/R 15.0	Z/R 20.0
1	.96327	.95489	.94642	.93792	.92941	.91238	.89538	.86157	.82820	.79548	.71770	.64711
2	.96210	.95381	.94543	.93702	.92858	.91167	.89475	.86107	.82778	.79513	.71744	.64692
3	.95859	.95060	.94250	.93433	.92611	.90954	.89289	.85958	.82654	.79407	.71668	.64634
4	.56166	.56215	.56242	.56259	.56267	.56242	.56151	.55772	.55166	.54386	.51956	.49200
5	.05074	.05377	.05927	.06580	.07245	.08507	.09674	.11816	.13763	.15535	.19231	.21947
6	.00005	.00012	.00025	.00048	.00083	.00200	.00388	.00988	.01849	.02893	.05835	.08707
7	.00002	.00005	.00009	.00016	.00026	.00060	.00114	.00301	.00604	.01028	.02522	.04385

```
C      PRESSURE DISTRIBUTION UNDER LONG EMBANKMENT (BOUSSINESQ)  NO.5177
 1100 READ 1000,NS,N
      GO TO (10,11,5,6,12,13),NS
   10 S=1.5
      GO TO 14
   11 S=2.
      GO TO 14
    5 S=2.5
      GO TO 14
    6 S=3.
      GO TO 14
   12 S=4.0
      GO TO 14
   13 S=8.0
   14 GO TO (902,903,904,905,906,997,998) ,N
  902 R1=0.1
      GO TO 4
  903 R1=0.25
      GO TO 4
  904 R1=0.5
      GO TO 4
  905 R1=1.0
      GO TO 4
  906 R1=2.
      GO TO 4
  997 R1=3.
      GO TO 4
  998 R1=4.
    4 DO 901 M=1,12
      GO TO (908,960,909,909,909,910,910,911,911,911,912,912),M
  908 R2=0.001
      GO TO 3
  960 R2=.5
      GO TO 3
  909 R2=R2+0.5
      GO TO 3
  910 R2=R2+1.0
      GO TO 3
  911 R2=R2+2.0
      GO TO 3
  912 R2=R2+5.0
    3 A=9999.
      DO 901 I=1,7
      PS=0.
      XI=I
      GO TO (913,913,913,914,914,915,915),I
  913 DO 22 J=1,10
      XJ=J
      DO 916 K=1,3
      GO TO (918,919,888),K
  918 B=(1.+S*R1/20.*(2.*XJ-1.)+(XI-1.)/2.)/(R1-XJ/10.*R1+R2)
  920 G=A**2+B**2+1.
      D=((2.*A*B*SQRT(G))/(G+(A**2)*(B**2)))*((G+1.)/G)
      IF(((G+A**2*B**2)**2)-(4.*A**2*B**2*G))101,102,101
  101 E=(2.*A*B*SQRT(G))/SQRT(((G+(A**2)*(B**2))**2)-(4.*(A**2*B**2)*G))
      IF (G-A**2*B**2)103,102,917
  919 B=(1.+S*R1/20.*(2.*XJ-1.)-(XI-1.)/2.)/(R1-XJ/10.*R1+R2)
      PS=PS+P
```

```
      GO TO 920
  917 P=(D+ATAN(E))/(20.*3.1416)
      GO TO 888
  102 P=(D+1.5708)/(20.*3.1416)
      GO TO 888
  103 P=(D+3.1416-ATAN(E))/(20.*3.1416)
  888 GO TO (916,916,916,925,925,940,940),I
  916 CONTINUE
   22 PS=PS+P
      GO TO 49
  914 DO 929 J=1,10
      XJ=J
      DO 929 K=1,3
      GO TO (924,926,927),K
  924 B=(2.+((XI-3.)*10.+2.*XJ-1.)*S*R1/20.)/(R1-XJ/10.*R1+R2)
      GO TO 920
  926 B=(((2.*XJ-1.)-10.*(XI-3.))*S*R1/20.)/(R1-XJ/10.*R1+R2)
      IF (B)930,930,920
  930 P=0.
      GO TO 929
  927 B=((10.*(XI-3.)-2.*XJ-1.)*S*R1/20.)/(R1-XJ/10.*R1+R2)
      IF (B)930,930,920
  925 GO TO (929,929,928),K
  928 P=-P
  929 PS=PS+P
      GO TO 49
  915 DO 931 J=1,10
      XJ=J
      DO 931 K=1,2
      GO TO (933,934),K
  933 B=(2.+S*R1+(XI- 5.)*S*R1/4.+(2.*XJ-1.)*S*R1/20.)/(R1-XJ/10.*R1+R2)
      GO TO 920
  934 B=(S*R1-(2.*XJ-1.)*S*R1/20.+(XI- 5.)*S*R1/4.)/(R1-XJ/10.*R1+R2)
      GO TO 920
  940 GO TO (931,935),K
  935 P=-P
  931 PS=PS+P
   49 IF(I-1)50,50,901
   50 PUNCH 2,S,R1,R2
      PUNCH 99
  901 PUNCH 51,I,PS
      TYPE 1000,NS,N
      N=N+1
      IF(N-7) 14,14,1100
   99 FORMAT (2H I,16X2HPS)
 1000 FORMAT (I2,I2)
    2 FORMAT(4HS = ,F5.1,4X6HH/R = ,F5.2,4X6HZ/R = ,F5.1)
   51 FORMAT(I2,10XF7.5)
C     S=SLOPE(S ON 1), R1=H/R (H=HT.,R=1/2 TOP WIDTH), R2=Z/R (Z=DEPTH),
C     VERTICAL STRESS = PS*H*UNIT WT.
      END
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00316
LRI